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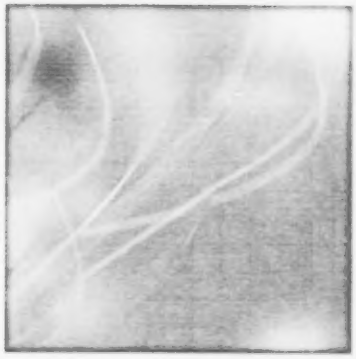
Measuring the Contribution of the Unincorporated Sector in the Canadian Economy, 1997 to 2002



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Abstract

This paper sheds light on the contribution of unincorporated enterprises to the Canadian economy in terms of gross domestic product (GDP) from 1997 to 2002. The study separates the aggregate business GDP, including its components, into the unincorporated and incorporated sectors. After describing the key legal and organizational differences between the unincorporated and incorporated sectors, including tax regime, limited liability, and number of entities, employment and capital intensity, it looks at the contribution of the two sectors across various industries. It provides estimates for 25 S-level industries and W-level detail for some of the more important industries of the unincorporated sector. In deriving the estimates, the study used the same data sources as those used in Statistics Canada's Input-Output Accounts. Results of the study suggest that the unincorporated sector contributed $82.2 billion in 2002 representing 10.1% of total business sector GDP, a slight decrease from 11.3% in 1997.

Keywords: self-employed owners of unincorporated enterprises, GDP, unincorporated sector, corporations, incorporated sector, employment, capital per worker, share of aggregate GDP.

Symbols

The following standard symbols are used in Statistics Canada publications:

. not available for any reference period
.. not available for a specific reference period
... not applicable
0 true zero or a value rounded to zero
0[s] value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
[p] preliminary
[r] revised
x suppressed to meet the confidentiality requirements of the *Statistics Act*
[E] use with caution
F too unreliable to be published

Executive summary

The importance of the unincorporated sector to employment has been well documented. For instance, self-employment in the unincorporated sector accounted for over 40% of all job growth in Canada between 1990 and 1998. Other measures of economic activity, however, have been lacking. This study provides a measure of the contribution of unincorporated enterprises to the Canadian economy in terms of gross domestic product (GDP) for the period 1997 to 2002.

The study separates the aggregate business sector GDP, including its components, into the unincorporated and incorporated sectors for 25 S-level industries and W-level detail for some of the more important industries of the unincorporated sector. In deriving the estimates, the study used the same data sources as those used to produce Statistics Canada's Input-Output Accounts. Furthermore, it discusses some of the key legal and organizational differences between the unincorporated and incorporated sectors including tax regime, limited liability, number of entities, employment and capital intensity.

The analysis finds the GDP generated by the unincorporated enterprises was $82.2 billion in 2002, growing substantially less (an average of 3.1% from 1997 to 2002) than the incorporated sector (an average of 5.9%). The weaker growth of the unincorporated sector was reflected in both goods-producing (primarily agriculture) and service-based industries. One possible explanation may be that many self-employed owners of unincorporated enterprises reentered the work force to work for corporations. Employment in corporations rose close to 1.4 million workers between 1997 and 2002 while employment in unincorporated enterprises fell marginally.

The study represents the first attempt to estimate GDP for the unincorporated sector. Future work may permit us to measure productivity of the sector and to further divide the business sector's GDP by size of firm for small, medium and large enterprises.

1 Introduction

Self-employment in the unincorporated sector accounted for over 40% of all job growth in Canada between 1990 and 1998.[1] Employment in the sector increased by 387,000 during this period according to Statistics Canada's Labour Force Survey. This growth caused the sector's share of total employment to peak at 11.7% in 1998, well above 9% seen during the 1980s, a period of much slower growth for the sector. However, during the late 1990s and early 2000s, its share has fallen back to that observed during the 1980s.

Self-employed owners of unincorporated enterprises hire paid help, unpaid workers, including family members, or work without paid help. They are typically small-sized enterprises that play an integral role in the small-business sector.

The importance of the sector's employment has been well documented, but other measures of economic activity are lacking. Gross domestic product (GDP)[2] produced by industry provides a useful tool to monitor economic performance as it measures the value added generated by an industry. This study provides a measure of Canadian GDP generated by self-employed owners in the unincorporated sector.

This study divides the GDP of the business sector into the unincorporated sector and the remainder which represents the incorporated sector. The key legal and organizational differences between the unincorporated and incorporated sectors are described. An overview of the methodology used in the study follows. Then estimates of GDP by industry are generated for the two sectors for the period from 1997 to 2002. Finally, the paper compares the relative contribution of the unincorporated business sector to the Canadian economy across industries.

2 Unincorporated and incorporated sectors

The System of National Accounts (SNA) manual (1993) defines "unincorporated enterprises" as "producer units within the household sector" that "are not incorporated as a separate legal entity from the household itself" (1993 SNA, paragraph 4.140). Furthermore, "the owner of a household enterprise usually plays a dual role: first, as the entrepreneur who is responsible for the creation and management of the enterprise; and second, as a worker who contributes labour inputs of a kind which could be provided by paid employees" (1993 SNA, paragraph 4.142). The operating surplus paid to the owner of an unincorporated business represents two kinds of income, referred to as mixed income: return to entrepreneurship and remuneration for work done (1993 SNA, paragraph 4.143).

The unincorporated sector is comprised of self-employed owners of unincorporated farms, businesses or professional practices. Unincorporated enterprises are typically small in size, but

1. The data are obtained from the Labour Force Survey. Also, see Baldwin and Chowhan (2003), and Manser and Picot (1999) for some background reading.
2. This study reports gross domestic product (GDP) at basic prices. It looks at the business sector and excludes all activity generated by government, non-commercial sector and owner occupied dwellings which accounted for about 24% of GDP in 2002.

often hire workers. They are typically single establishments[3] that are operating in a single province. They usually have relatively low start-up costs and require less working capital compared to larger businesses.[4]

Individuals create unincorporated enterprises for many reasons. Often, they do so because of a desire for the independence associated with running a business. At times, particularly during poor economic times, they are pushed into entrepreneurship for lack of full time jobs.[5] Finally, some professions are required by their governing bodies to adopt this form of business (for example, physicians, lawyers, etc.). These individuals create unincorporated enterprises in various industries. This includes physicians and dentists in the Health Industry; lawyers, accountants and consultants in the Professional Services Industry; landlords, insurance and stock brokers in the Finance Industry; contractors who build or renovate houses in the Construction Industry; farmers in the Agriculture Industry; owners of retail stores and individuals selling goods directly to customers in the Retail Trade Industry; truck drivers in the Transportation Industry; and barbers, hair stylists and housecleaners in the Other Service Industry. Many organize their business as sole proprietorships, while others form partnerships.

The 1993 SNA defines a corporation as "a legal entity, created for the purpose of producing goods and services for the market, that may be a source of profit or other financial gain to its owner(s); it is collectively owned by shareholders who have the authority to appoint directors responsible for its general management" (1993 SNA, paragraph 4.23).

The incorporated sector is comprised predominantly of larger companies, including multinationals, operating in many regions across Canada. The sector covers public corporations, national privately controlled corporations, foreign controlled corporations as well as government business enterprises (SNA, paragraphs 4.71 and 4.84).[6] The incorporated sector also includes self-employed persons who organize their business as corporations. The sector crosses all industries, both service-based and goods-producing, making up the greater part of the business sector of the economy producing the bulk of the nation's output of goods and services. They tend to hire larger numbers of paid workers, and require more substantial investments in buildings and machinery and equipment. They tend to use larger amounts of capital per worker compared to the unincorporated sector.

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3. Establishment is the level at which the accounting data required to measure production are available (principal inputs, revenues, salaries and wages). The establishment, as a statistical unit, is defined as the most homogeneous unit of production for which the business maintains accounting records from which it is possible to assemble all the data elements required to compile the full structure of the gross value of production (total sales or shipments, and inventories), the cost of materials and services, and labour and capital used in production.
4. See Forms of Business Organization by Canada Business, Government of Canada, at www.cbsc.org.
5. See Manser and Picot (1999) for an explanation of why individuals become self-employed.
6. See Statistics Canada (1975, 3:199). It states that "all business enterprises resident in Canada which are organized as corporations are included in the sector, irrespective of whether they are owned or controlled by Canadians or non-residents."

3 Key differences between the unincorporated and incorporated sectors

3.1 Tax regime

Canada Revenue Agency (CRA) defines various types of business structures. A corporation is a separate legal entity that can enter into contracts and own property in its own name, separately and distinctly from its owners. A corporation is created by completing articles of incorporation, and filing them with the appropriate provincial, territorial, or federal authorities. It must file a corporate income tax return (T2). These corporations make up the incorporated sector.

All other businesses, of which there are two main types, make up the unincorporated sector. The first type is a sole proprietorship, which is a business that is not incorporated and is owned by one person. The owner has sole responsibility for decision-making and receives all profits, is responsible for all losses and reports business income on a T1 Individual income tax return.[7]

The second type is a partnership which is "usually the relationship between persons who carry on a business in common with the belief they will make a profit" (Canada Revenue Agency 2009).[8] Each partner contributes money, labour, property, or skills to the partnership. In return, each partner is entitled to a share of the profits or losses in the business. The business profits (or losses) are usually divided among the partners based on a partnership agreement.

One of the largest groups in terms of gross domestic product (GDP) in the unincorporated sector consists of various professionals, including physicians, dentists, lawyers and consultants. CRA defines professional income as including all fees received for goods and services. Many of these professionals are involved in partnerships.

The Department of Finance (September 2005) outlines the integration concept of income earned and the effective tax rate among different business structures.[9] Table 1 shows the effective tax rates for business income earned through an unincorporated enterprise, income earned and distributed by a public corporation and the same by a small Canadian-controlled private corporation (CCPC) that is subject to the small business tax rate.

The effective income tax rate for a small CCPC (37.1%) is comparable to the unincorporated business rate of 38.0%.[10] Dividends received from corporations are subject to a higher corporate and personal income tax rate of 49.6%. However, if the income is retained within the corporation

7. For more detail on corporations and sole proprietors, see Canada Revenue Agency's website at http://www.cra-arc.gc.ca.
8. For more detail on partnerships and a description of professional activities and income, see Canada Revenue Agency's website at http://www.cra-arc.gc.ca.
9. See Department of Finance Canada (2005) consultation paper, *Tax and Other Issues Related to Publicly Listed Flow-Through Entities*, for a review of the integration concept, for the calculations of the effective tax rates and underlying assumptions employed.
10. As the Department of Finance consultation paper (2005:13, footnote 8) points out "this comparison could be made using higher income tax rates, such as the top federal-provincial personal income tax rate. The example outlined in Table 2 [Table 1 in this study] uses the effective federal-provincial personal income tax rate of 38 per cent." It also assumes an average federal-provincial Dividend Tax Credit of 20%. It further states that the current average federal-provincial income tax rate of 35% for general income does not take into account provincial and federal capital taxes but includes the 4% federal surtax.

to allow the business to grow, the corporation is able to defer tax to the extent that the earnings are not distributed to the shareholder. There are some possible tax advantages for CCPC, including the small business tax rate and $500,000 capital gains exemption. However, corporations require extensive record keeping and are closely regulated (e.g., corporations must file an annual report).[11]

Table 1
Integration of personal and corporate income taxes under various business structures

	Unincorporated enterprise	Public corporation	Canadian-controlled private corporation (small)
Business income (dollars)	100.00	100.00	100.00
Effective corporate income tax rates			
Federal (percent)	...	22.00	13.10
Provincial (percent)	...	13.00	5.70
Total (percent)	**...**	**35.00**	**18.80**
Amount distributed to individual (dollars)	...	65.00	81.20
Effective personal income tax rates			
Federal (percent)	25.00	14.60	14.60
Provincial (percent)	13.00	7.90	7.90
Total (percent)	**38.00**	**22.50**	**22.50**
Personal income tax (dollars)	38.00	14.63	18.27
After-tax amount available to individual (dollars)	62.00	50.37	62.93
Combined corporate-personal income tax rate (percent)	38.00	49.60	37.10

Source: Department of Finance, 2005, *Tax and Other Issues Related to Publicly Listed Flow-through (Income Trust and Limited Partnership)*, Table 2, Integration of Personal and Corporate Income Taxes Under Various Business Structures.

3.2 Limited liability

Shareholders in corporations have limited liability. This means that shareholders are not responsible for the corporation's debts. However, limited liability may not always protect shareholders from creditors. For example, if a smaller, more closely held corporation wants to borrow money from a creditor, the creditor may ask for the shareholder's guarantee that the debt will be repaid. This means that the shareholders can in some circumstances be personally liable for that debt if the corporation does not pay it back.

An unincorporated enterprise does not have a separate legal status from the business owners. They are personally liable for all debts and obligations (known as unlimited liability) and the continuity of the business depends on their presence.

In some provinces, professionals such as doctors and lawyers were not permitted to incorporate during the study period.[12] These professions are self-regulatory with their respective governing bodies overseeing their actions.

11. See Canadian Federation of Independent Business (n.d.).
12. Data from Canada Revenue Agency's Generalized Index of Financial Information provides the number of the various professionals who had incorporated. This data set starts in 1999. A large number of professionals were incorporated in Alberta and British Columbia while less were in Nova Scotia, New Brunswick and Manitoba (i.e., approximately 2,500 doctors in Alberta and approximately 3,500 doctors in British Columbia in 2000).

In a general partnership, the owners of the company share in the management of the company and are bound by the actions of any member of the partnership, as long as these are within the usual scope of its operations. A general partner has unlimited liability for debts of the partnership. Limited partnerships can also be formed under provincial laws. These require that the partnership have one or more general partners who are involved in management, but they also involve limited partners who are not involved in management of the company. The responsibilities of the latter are similar to those of shareholders of a corporation, so that liability is limited, and they cannot be liable for more than the amount of capital they have contributed to the business.

3.3 Number of incorporated and unincorporated entities

Ideally, we would like to measure the number of business entities.[13] Since this information does not exist for the unincorporated sector at this time in the Business Register,[14] this paper will choose to define the business entity by the number of self-employed owners of unincorporated enterprises.[15]

The Labour Force Survey (LFS) is a source of the number of unincorporated entities. It provides data on the number of self-employed owners of unincorporated enterprises with paid help, without paid help and unpaid family workers. As for corporations, the *Corporations Returns Act* mandates data collection on the number of Canadian and foreign-controlled incorporated enterprises.[16]

For 1999, the LFS reports that there were 1.6 million self-employed owners of unincorporated enterprises (Table 2). However, by 2002 this type of business had declined substantially, both in absolute and relative terms. On the other hand, data collected under the *Corporations Returns Act* shows that the number of corporations had increased from 1.0 million in 1999 to 1.2 million in 2002. The total number of entities (2.6 million) did not change throughout the period, but the percent that were unincorporated fell from 61% to 56% over the period.[17]

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13. A business entity is defined as a separate legal operating business.
14. An exact measure of the number of unincorporated businesses, as opposed to individuals, is not available in Canada. Statistics Canada's Business Register (BR) gives a count of the number of establishments in Canada (over 2.2 million in 2002) (see Industry Canada [2002]). Over 1.0 million are employee businesses that maintain a payroll of at least one person. Over 1.2 million do not have any employees registered with the Canadian Revenue Agency and fall in the indeterminate category of the BR. Many of these establishments would be part of the unincorporated sector. However, the BR cannot tell us whether these establishments are incorporated or not.
15. It is not identical to the number of business entities since more than one person can own more than one business, and many unincorporated partners can operate one business.
16. Enterprise (the top of the hierarchy i.e. enterprise, company, establishment and location), is associated with a complete set of financial statements. The enterprise, as a statistical unit, is defined as the organisational unit of a business that directs and controls the allocation of resources relating to its domestic operations, and for which consolidated financial and balance sheet accounts are maintained from which international transactions, an international investment position and a consolidated financial position for the unit can be derived.
17. The Business Register (BR) reported 2.2 million establishments in Canada in 2002 which is fewer than the number of unincorporated individuals and corporations (2.6 million) as shown in Table 2. There are a number of reasons for the difference. The coverage in the *Corporations Returns Act* and the BR is different; *Corporations Returns Act* covers enterprises and not establishments as per the definition used by the BR. Second, large enterprises have multiple establishments and it is possible for a single establishment (of an unincorporated enterprise) having more than one owner.

Table 2
Number of entities, corporations and unincorporated individuals, 1999 to 2002

	1999	2000	2001	2002
		number		
Entities				
Corporations[1]	1,020,108	1,041,535	1,133,838	1,155,589
Unincorporated individuals[2]	1,623,300	1,561,900	1,477,200	1,494,000
Total	**2,643,408**	**2,603,435**	**2,611,038**	**2,649,589**
		percent		
Share to total				
Corporations	39	40	43	44
Unincorporated individuals[2]	61	60	57	56

1. Data are collected by the *Corporations Returns Act* at the enterprise level.
2. Data are collected by the Labour Force Survey for the owners of unincorporated enterprises.
Source: Statistics Canada, CANSIM tables 179-005 (starts in 1999) and 282-0012.

3.4 Employment

Employment in unincorporated enterprises consists of self-employed owners who work for themselves and paid employees.[18] The employment of the first group is obtained directly from data in the LFS on self-employment of working owners of unincorporated farms, businesses or professional practices. The employment estimates of the second group (paid employees of unincorporated enterprises) was estimated by applying the unincorporated share of labour income to the LFS data on private sector employment of paid employees.[19] The self-employment of owners of unincorporated enterprises (first group) was added to employment estimates of the second group to arrive at the employment for the unincorporated sector.

Similarly, the estimate for the incorporated sector includes both those that are self-employed owners of corporations and those that are paid employees of corporations. The first group (self-employment owners of corporations) were obtained directly from the LFS. The second group (the estimates for paid employees) were derived residually by subtracting the estimate of the unincorporated sector (estimated above) from the private sector employment of paid employees from the LFS. They were then summed to arrive at the total employment for corporations.

Employment for unincorporated enterprises peaked in 1998 at 1.9 million workers representing a share of 16.9% of total employment in the private sector (Table 3). This share marginally declined to 14.3% by 2002.

18. Paid employment in the total economy includes both private and public workers. A private-sector paid employee works for a private firm or business. Public employees work for federal, provincial, or local governments, for a government agency, crown corporations, or a government funded institution such as a school or hospital. The study only considers the private sector employment as published by the Labour Force Survey.
19. Labour income includes wages and salary and supplementary labour income. The unincorporated share of labour was derived from the study.

Table 3
Private sector employment by type of business, 1997 to 2002

	1997	1998	1999	2000	2001	2002
			number			
Employment						
Unincorporated enterprises	1,846,631	1,927,601	1,909,889	1,852,061	1,761,768	1,779,371
Corporations	9,207,969	9,477,899	9,795,411	10,111,939	10,340,632	10,621,829
Total	**11,054,600**	**11,405,500**	**11,705,300**	**11,964,000**	**12,102,400**	**12,401,200**
			percent			
Shares						
Unincorporated enterprises	16.7	16.9	16.3	15.5	14.6	14.3
Corporations	83.3	83.1	83.7	84.5	85.4	85.7
Growth Rates						
Unincorporated enterprises	...	4.4	-0.9	-3.0	-4.9	1.0
Corporations	...	2.9	3.4	3.2	2.3	2.7
Total	**...**	**3.2**	**2.6**	**2.2**	**1.2**	**2.5**

Source: Taken from authors' calculations, using Statistics Canada Labour Force Survey (CANSIM table 282-0012) and using the shares for unincorporated enterprises and corporations derived from this study.

The average size of corporate businesses (measured in terms of employment) is about eight times the size of the average in the unincorporated sector (Table 4). The larger number for corporations reflects that they hire many more paid employees compared to the unincorporated sector which is typically owner operated and employ a smaller number of employees. Large businesses dominate the incorporated sector with a few hundred accounting for the majority of GDP. The very largest corporations that dominate the sector tend to have thousands of employees.

Table 4
Average size of businesses by the number of employees

	1999	2000	2001	2002
		number		
Corporations	9.6	9.7	9.1	9.2
Unincorporated enterprises	1.2	1.2	1.2	1.2

Source: Author's calculations based on dividing employment from Table 3 with number of entities from Table 2.

3.5 Capital intensity

The incorporated sector is dominated by larger corporations that make substantial capital investments. They often require factory-type investment in the form of buildings, machinery and equipment, employing large amounts of capital per worker. Unincorporated enterprises are smaller in size and operate mainly in service-based industries using smaller amounts of capital per worker.

This study estimated the depreciation (capital consumption) per worker used by the two sectors. Depreciation is an indication of the capital intensity: the larger the depreciation, the more capital is employed in the industry. Table 5 shows the depreciation by worker for unincorporated enterprises and corporations across various industries. The average depreciation per worker in 2002 was 1.7 times larger for corporations than for unincorporated enterprises.

The differences between the two sectors are quite noticeable across industries.[20] The incorporated sector had much larger depreciation per worker in the highly capital intensive goods-producing industries ($13,273 per worker in 2002) compared to service-based industries ($5,833 per worker in 2002). As for the unincorporated sector, they also exhibited much larger depreciation per worker in the goods-producing industries ($8,120 per worker in 2002) compared to the service producing industries ($3,803 per worker in 2002). However, their depreciation per worker is much lower than the corporate sector in both the goods-producing industries and service-based industries.

The major exception is the finance sector where the depreciation per worker was larger for the unincorporated sector. A large component of the unincorporated sector was Lessors of Real Estate industry (i.e. landlords), which represented about 95% of all of the depreciation within the sector for finance. On the other hand, the incorporated sector is composed of banks, insurance, automotive equipment rentals, other rental and leasing and non-depository credit intermediation. In accommodation and food services, capital intensity is about the same in the unincorporated and incorporated sectors.

Finally, there is a large difference in the information, culture and recreation industry between the two sectors. Many of the corporations here are part of the telecommunications, broadcasting, cable and data processing industries, which are very capital intensive. The unincorporated sector, on the other hand, is mainly involved in culture industries (i.e. independent artists and movie producers, writers and performers), which are less capital intensive.

20. The presentation of the industries in Table 5 follows the level of detail provided by the published employment data from the Labour Force Survey (CANSIM table 282-0012).

Table 5
Depreciation per worker, 1997 and 2002

	Unincorporated sector		Incorporated sector	
	1997	2002	1997	2002
	dollars			
Goods				
Agriculture	8,440	13,941	8,211	13,856
Forestry and logging, fishing, mining and oil and gas	5,145	5,845	48,900	76, 363
Utilities	F	F	162,191	144,871
Construction	3,235	3,738	4,250	5,470
Manufacturing	1,091	1,525	6,158	6,920
Services				
Trade	1,498	2,039	2,383	2,732
Transportation and warehousing	7,648	7,047	7,474	11,321
Finance, insurance, real estate and leasing	26,358	33,365	10,994	16,381
Professional, scientific and technical services	842	1,318	1,486	2,463
Business, building and other support services	1,089	1,193	2,014	2,285
Educational services	938	1,294	981	2,395
Health care and social assistance	1,464	1,700	951	766
Information, culture and recreation	920	864	14,863	21,475
Accommodation and food services	1,657	1,940	1,636	1,972
Other services	480	653	1,128	1,468
Special aggregations				
All industries	3,922	4,799	6,568	8,176
Goods	5,906	8,120	11,404	13,273
Services	3,175	3,803	4,298	5,833

Source: Taken from author's calculations.

4 Overview of methodology

At present, the Canadian Input-Output Accounts combine the values of the unincorporated enterprises and corporations in its estimates of industry gross domestic product (GDP). This study separates the aggregate business GDP (including its components of labour income and other operating surplus), into the unincorporated and incorporated sectors. It also expands the estimate of other operating surplus for both sectors to include the various components (such as interest and depreciation) which are not reported separately in the Canadian Input-Output Accounts (see Appendix A for a detailed description of the methodology).

No attempt has yet been made to estimate the GDP generated by the unincorporated sector on a regular basis. Baldwin and Chowhan (2003) mainly utilized the net income component of GDP for the unincorporated sector to study growth rates of income. Siddiqi (2004) estimated GDP, along with its components, of the unincorporated business sector for 2000 in order to provide precise estimates of its levels. This study uses the methodology developed by Siddiqi and expands the study period from 1997 to 2002.

The GDP estimates include labour income of employed workers in the unincorporated and incorporated sectors, mixed income of unincorporated owners[21], net indirect taxes and operating surplus of both sectors where the latter includes interest, depreciation, and resource rents while

21. Mixed income of the unincorporated sector are payments for labour services and a rate of return for capital employed. For a review of the methodology of estimating mixed income, see Statistics Canada (2008).

the incorporated sector also includes profits. The profits and wages earned by owners in the unincorporated sector are reflected in mixed income.

Table 6 illustrates the components of GDP in the unincorporated and incorporated sectors. The unincorporated sector generated most of its GDP through mixed income (57.6% in 2002) which represents profits and implicit wages earned by owners. This is followed by other operating surplus (18.7%) which is comprised of mainly depreciation and interest payments, while labour income represented about 15.4%. As for the incorporated sector, it generated most of its GDP through labour income representing 59.0% of the total in 2002. Operating surplus was much larger for the incorporated sector since it included corporate profits (representing about 20.8% of total GDP).

The data were processed at the S-level of aggregation for all industries in the business sector while some industries were processed at the W level.[22] The data sources used for the study are the same as the ones used to produce the Canadian Input-Output Accounts. All estimates of the unincorporated sector were done in conjunction with the corporate one.

For the unincorporated sector, data sources for labour income, other operating surplus and gross output were drawn primarily from the Statistics Canada Tax Estimate Program, the T1 portion of Statistics Canada surveys; as well as worksheets of System of National Accounts analysts. Mixed income was used 'as is' from the Canadian Input-Output Accounts.

As for the corporate sector, labour income, operating surplus and gross output were estimated residually by subtracting the unincorporated portion from the respective estimates in the Canadian Input-Output Accounts. Data on the components of other operating surplus were drawn from the T2 portion of Statistics Canada surveys, the Generalized Index of Financial Information (GIFI) and the Annual Financial and Taxation Statistics (AFTS). For example, the interest and depreciation components of operating surplus for the incorporated sector were derived from GIFI and from the AFTS. Corporation profits were derived residually by subtracting the corporate estimates of the various components of other operating surplus (i.e. interest, depreciation, resource rents and surplus adjustments) from the corporate portion of other operating surplus.

22. The S-level aggregation of the Input-Output Accounts is the composition of the economy for 25 industry groupings while the W-level aggregation is a more detailed level of 300 industries.

Table 6
Comparison of gross domestic product components of value added of the unincorporated and incorporated sectors, 1997 and 2002

	Level		Average growth rate	Distribution to gross domestic product	
	1997	2002		1997	2002
	millions of dollars			percent	
Unincorporated sector					
Gross domestic product at basic prices	69,218	82,196	3.1	100.0	100.0
Labour income	10,792	12,631	2.8	15.6	15.4
Mixed income	36,237	47,337	5.1	52.4	57.6
Other operating surplus					
Other operating surplus[1]	15,738	15,369	-0.4	22.7	18.7
Total	**15,738**	**15,369**	**-0.4**	**22.7**	**18.7**
Net taxes on production[2]	6,452	6,858	1.0	9.3	8.3
Incorporated sector					
Gross domestic product at basic prices	542,899	734,791	5.9	100.0	100.0
Labour income	326,395	433,843	5.5	60.1	59.0
Operating surplus					
Other operating surplus[1]	96,777	118,706	3.8	17.8	16.2
Corporation profits	94,237	153,124	10.4	17.4	20.8
Total	**191,014**	**271,830**	**7.1**	**35.2**	**37.0**
Net taxes on production[2]	25,490	29,119	2.4	4.7	4.0
	Level				
	1997	2002		Average growth rate	
	millions of dollars			percent	
Total business sector gross domestic product at basic prices	612,118	816,987		5.6	

1. Includes interest, depreciation, claims, resource rents and financial surplus and software adjustment.
2. Includes subsidies on production and indirect taxes on production.
Source: Taken from author's calculations.

Trends in the ratio of GDP (including components) to gross output were analyzed by industry for each sector and between the two sectors. It is assumed that these ratios were consistent over the period of the study. The underlying difference in the ratios between the two sectors was determined based on ratios obtained from the various data sources (for example by analyzing the T1 and T2 portions of Statistic Canada surveys).

5 Contribution of the unincorporated sector to the gross domestic product in 2002

The unincorporated enterprises in the business sector accounted for $82.2 billion of gross domestic product (GDP) in 2002 representing 10.1% of total aggregate business sector GDP (Table 7).[23] Service-based industries contributed most of the activity ($64.4 billion).

23. For interested readers, see Appendix B for estimates on gross output.

Table 7
Unincorporated gross domestic product for selected industries, 1997 to 2002

	Level						Growth rates					Average growth rates
	1997	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	2002/1997
	millions of dollars						percent					
All industries	69,218	71,841	75,406	78,700	80,333	82,195	3.8	5.0	4.4	2.1	2.3	3.1
Goods producing	17,195	17,310	17,938	17,755	18,204	17,810	0.7	3.6	-1.0	2.5	-2.2	0.6
Services	52,023	54,532	57,468	60,944	62,129	64,387	4.8	5.4	6.0	1.9	3.6	4.0
Industry group												
Finance	15,566	16,433	17,067	17,726	17,548	18,246	5.6	3.9	3.9	-1.0	4.0	2.9
Lessors of real estate	13,674	14,438	14,853	15,240	15,008	15,502	5.6	2.9	2.6	-1.5	3.3	2.2
Agencies, brokerage and other insurance	861	894	1,000	1,196	1,192	1,112	3.8	11.9	19.6	-0.3	-6.7	4.9
Office of real estate agents/brokers	792	896	903	935	1,059	1,117	13.1	0.8	3.5	13.3	5.5	6.8
Health	12,163	12,438	13,011	13,898	14,830	15,549	2.3	4.6	6.8	6.7	4.8	4.6
Offices of physicians	6,785	6,990	7,313	7,662	8,127	8,510	3.0	4.6	4.8	6.1	4.7	4.2
Offices of dentists	2,454	2,615	2,712	2,948	2,970	3,069	6.6	3.7	8.7	0.7	3.3	4.2
Professional services	7,542	8,258	9,179	10,111	10,195	10,275	9.5	11.2	10.2	0.8	0.8	6.0
Construction	6,903	7,042	7,323	7,582	8,025	8,591	2.0	4.0	3.5	5.8	7.1	4.1
Agriculture	7,718	7,751	7,787	7,329	7,405	6,476	0.4	0.5	-5.9	1.0	-12.5	-2.7
Retail	4,604	4,807	5,199	5,446	5,548	5,688	4.4	8.2	4.8	1.9	2.5	3.9
Transportation	3,441	3,784	3,615	3,636	3,654	3,757	10.0	-4.5	0.6	0.5	2.8	1.5
Truck transportation	2,490	2,803	2,626	2,668	2,777	2,817	12.6	-6.3	1.6	4.1	1.4	2.2
Administrative services	1,964	2,016	2,186	2,446	2,645	2,823	2.6	8.4	11.9	8.1	6.7	7.3
Other services	2,018	2,090	2,277	2,391	2,522	2,608	3.6	8.9	5.0	5.5	3.4	4.9
Accommodation and food service	1,759	1,603	1,511	1,618	1,576	1,710	-8.9	-5.7	7.1	-2.6	8.5	-0.5
Food service and drinking places	1,306	1,191	1,078	1,179	1,158	1,202	-8.8	-9.5	9.4	-1.8	3.8	-1.3
Wholesale	1,336	1,428	1,638	1,728	1,551	1,601	6.9	14.7	5.5	-10.2	3.2	3.3
Education	841	910	1,004	1,071	1,123	1,176	8.2	10.3	6.7	4.9	4.7	6.6
Manufacturing	741	742	861	947	874	791	0.1	16.0	10.0	-7.7	-9.5	1.1
Forestry	782	733	777	768	775	799	-6.3	6.0	-1.2	0.9	3.1	0.4
Arts and entertainment	642	551	547	629	698	722	-14.2	-0.7	15.0	11.0	3.4	2.1
Fishing	603	553	703	672	621	662	-8.3	27.1	-4.4	-7.6	6.6	1.6
Mining and oil and gas extractions	297	333	306	265	285	265	12.1	-8.1	-13.4	7.5	-7.0	-1.8
Information services	147	214	234	244	239	232	45.6	9.3	4.3	-2.0	-2.9	9.6
Support activities for agriculture	145	153	164	174	195	197	5.5	7.2	6.1	12.1	1.0	6.0
Utilities	7	4	17	19	26	28	-42.9	325.0	11.8	36.8	7.7	50.0

Source: Taken from author's calculations.

In order of importance by share of GDP, the Finance Industry ranks at the top (at the S-level of aggregation) contributing about $18.2 billion where Lessors of Real Estate (landlords) accounted for about 80% of the industry, making it the largest W-level industry in the unincorporated sector (Table 7 and Table 8). Next, the Health Industry was estimated to be $15.5 billion in 2002 representing about one fifth of the total GDP of the unincorporated sector. Physicians accounted for over 50% of the industry, while dentists made up another 20%. Professional Services generated about $10.3 billion where lawyers and accountants represented over 60% of the industry.[24] Others services include for example engineering, computer system design, and administrative management and general management consulting. Next, the unincorporated enterprises in the Construction Industry generated about $8.6 billion of new construction, repairs and renovations to existing buildings. This industry consists of unincorporated enterprises engaged in construction of residential buildings and the specialty trade contractors who work on finished carpentry, painting, dry wall, plumbing, electrical, flooring, site preparation, framing and masonry.

The Agriculture Industry's unincorporated GDP was estimated to be about $6.5 billion. A number of factors have affected this industry. The shift towards larger and fewer farms has been ongoing since the 1940s.[25] Rising farm productivity has led to large declines in farm employment. More farming activity is being conducted as second jobs, as farmers and their spouses take advantage of better non-farm employment opportunities.[26]

In the Retail Industry, unincorporated stores operate in a variety of areas. Over 75% of retail sales are generated from the following industries: pharmacies and drug stores; other direct selling establishments (i.e. direct personal retailing operators), convenience stores; gasoline stations with convenience stores and other gasoline stations; grocery stores; used car dealers; all other general merchandise stores; sporting goods stores; gift, novelty and souvenir stores; and used merchandise.

The unincorporated sector of the Trucking Industry generated about $2.8 billion. Most of these are owner-operator carriers (self-employed) that are under contract to for-hire or private carriers. Another segment is small for-hire carriers with operating revenue of less than $1 million.

5.1 Gross domestic product unincorporated enterprises by industry

Unincorporated enterprises in aggregate generated about one tenth of the total business sector GDP between 1997 and 2002. However, there are enterprises of the unincorporated sector that generated more than half of their industry's business sector GDP. The shares for Offices of Physicians (73.7% in 2002), Offices of Dentists (64.6%), Legal and Accounting Services (66.0%), Lessors of Real Estate (44.7%), Agriculture (44.9%) and Fishing (58.9%) represent a large portion of the total business sector GDP in each of their respective industries (Table 8).

24. See Rashid (2000) for background reading.
25. See Statistics Canada (1991:3).
26. See Bowlby (2002).

The shares were high for physicians, dentists and lawyers because many were not permitted to incorporate in several provinces during the study period. The declining share of the agriculture industry for unincorporated farms (60.5% in 1997 to 44.9% in 2002) may be the result of several historical trends (as mentioned in the previous page) in the industry.

Table 8
Gross domestic product at basic prices, proportion of total and share of aggregate gross domestic product for selected unincorporated industries, 1997 to 2002

	Proportion of total		Share of total gross domestic product	
	1997	2002	1997	2002
	percent			
All industries	100.0	100.0	11.3	10.1
Goods producing	24.8	21.7	6.5	5.2
Services	75.2	78.3	15.0	13.6
Industry group				
Finance	22.5	22.2	17.0	15.1
Lessors of real estate	19.8	18.9	46.6	44.7
Agencies, brokerage and other insurance	1.2	1.4	21.9	21.3
Office of real estate agents/brokers	1.1	1.4	23.0	19.5
Health	17.6	18.9	60.2	57.0
Offices of physicians	9.8	10.4	79.0	73.7
Offices of dentists	3.5	3.7	71.0	64.6
Professional services	10.9	12.5	25.0	21.3
Construction	10.0	10.5	16.1	14.9
Agriculture	11.2	7.9	60.5	44.9
Retail	6.7	6.9	10.9	9.7
Transportation	5.0	4.6	9.0	7.9
Truck transportation	3.6	3.4	24.3	20.5
Administrative services	2.8	3.4	12.8	11.4
Other services	2.9	3.2	15.1	13.8
Accommodation and food service	2.5	2.1	9.0	6.8
Food service and drinking places	1.9	1.5	10.3	7.2
Wholesale	1.9	1.9	3.1	2.9
Education	1.2	1.4	56.0	51.6
Manufacturing	1.1	1.0	0.5	0.4
Forestry	1.1	1.0	14.3	14.0
Arts and entertainment	0.9	0.9	11.3	8.6
Fishing	0.9	0.8	71.2	58.9
Mining and oil and gas extractions	0.4	0.3	0.9	0.5
Information services	0.2	0.3	0.6	0.6
Support activities for agriculture	0.2	0.2	19.4	17.7
Utilities	0.0	0.0	0.0	0.1

Source: Taken from author's calculations.

Table 9
Corporations' gross domestic product for selected industries, 1997 to 2002

	Level						Growth rates					Average growth rates
	1997	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	2002/1997
	millions of dollars						percent					
All industries	542,900	564,916	616,332	690,985	712,266	734,791	4.1	9.1	12.1	3.1	3.2	5.9
Goods producing	247,268	250,447	280,242	328,639	324,875	325,324	1.3	11.9	17.3	-1.1	0.1	5.3
Services	295,632	314,470	336,092	362,346	387,391	409,468	6.4	6.9	7.8	6.9	5.7	6.4
Industry group												
Manufacturing	141,525	149,334	169,445	186,515	179,061	181,640	5.5	13.5	10.1	-4.0	1.4	4.7
Finance	76,261	79,454	84,182	90,546	97,837	102,773	4.2	6.0	7.6	8.1	5.0	5.8
Lessors of real estate	15,667	15,466	17,866	16,791	18,491	19,184	-1.3	15.5	-6.0	10.1	3.7	3.7
Agencies, brokerage and other insurance	3,067	3,116	3,010	3,268	3,673	4,103	1.6	-3.4	8.6	12.4	11.7	5.6
Office of real estate agents/ brokers	2,651	2,815	3,124	3,440	4,180	4,601	6.2	11.0	10.1	21.5	10.1	12.3
Wholesale	42,355	44,020	46,619	49,204	51,800	53,520	3.9	5.9	5.5	5.3	3.3	4.4
Mining and oil and gas extractions	33,639	27,101	34,161	60,641	59,157	53,330	-19.4	26.1	77.5	-2.4	-9.9	9.8
Retail	37,618	40,754	42,616	45,865	48,879	53,196	8.3	4.6	7.6	6.6	8.8	6.9
Construction	36,093	37,116	38,902	42,066	46,186	49,192	2.8	4.8	8.1	9.8	6.5	6.0
Transportation	34,683	35,959	38,163	40,261	42,716	43,853	3.7	6.1	5.5	6.1	2.7	4.4
Truck transportation	7,770	8,564	8,946	9,533	10,877	10,927	10.2	4.5	6.6	14.1	0.5	6.8
Professional services	22,570	26,213	28,546	33,456	35,879	37,921	16.1	8.9	17.2	7.2	5.7	11.3
Information services	25,939	28,053	30,086	31,906	33,965	35,994	8.1	7.2	6.0	6.5	6.0	6.5
Utilities	25,435	24,941	25,213	26,222	27,013	26,897	-1.9	1.1	4.0	3.0	-0.4	1.0
Accommodation and food service	17,712	18,950	20,417	21,645	22,423	23,451	7.0	7.7	6.0	3.6	4.6	5.4
Food service and drinking places	11,391	12,099	13,371	14,185	14,792	15,420	6.2	10.5	6.1	4.3	4.2	5.9
Administrative services	13,361	14,653	16,531	17,921	19,862	22,047	9.7	12.8	8.4	10.8	11.0	10.8
Other services	11,387	11,923	13,080	14,125	15,137	16,242	4.7	9.7	8.0	7.2	7.3	7.1
Health	8,048	8,472	9,195	10,058	10,910	11,730	5.3	8.5	9.4	8.5	7.5	7.6
Offices of physicians	1,804	1,896	2,072	2,406	2,775	3,034	5.1	9.3	16.1	15.3	9.3	11.4
Offices of dentists	1,004	1,128	1,212	1,271	1,518	1,680	12.4	7.4	4.9	19.4	10.7	11.2
Agriculture	5,038	6,052	6,656	7,132	7,764	7,956	20.1	10.0	7.2	8.9	2.5	9.7
Arts and entertainment	5,036	5,194	5,725	6,380	6,965	7,640	3.1	10.2	11.4	9.2	9.7	8.6
Forestry	4,691	4,976	4,712	4,811	4,354	4,927	6.1	-5.3	2.1	-9.5	13.2	0.8
Education	662	825	932	979	1,018	1,101	24.6	13.0	5.0	4.0	8.2	11.1
Support activities for agriculture	603	649	826	873	894	919	7.6	27.3	5.7	2.4	2.8	8.7
Fishing	244	277	325	379	446	462	13.5	17.3	16.6	17.7	3.6	14.9

Source: Taken from author's calculations.

5.2 Gross domestic product of the incorporated sector in 2002

The incorporated sector generated $734.8 billion of GDP in 2002. Slightly more was generated from the service-based industries (about 55.7% of total GDP) compared to goods-producing industries (44.3%) (Table 9). The incorporated sector was more volatile in terms of growth rates compared to the unincorporated sector largely because of large swings observed in the goods-producing industries. The Manufacturing Industry grew by 13.5% and 10.1% in 1999 and 2000 respectively, and then fell by 4.0% in 2001. The Mining, Oil and Gas Industry fell by 19.4% in 1998 and grew by 26.1% and 77.5% in 1999 and 2000, respectively. The growth in the unincorporated sector is more stable since it is largely composed of service-based industries and the overall service industry increased steadily between 2% to 6% during 1997 to 2002.

5.3 Slower growth in the unincorporated sector

Between 1997 and 2002, GDP of the unincorporated sector grew on average 3.1% per year, more slowly than that of the incorporated sector, which grew at an average rate of 5.9% per year.

The weaker GDP growth of the unincorporated sector compared to the corporate sector was reflected in both the goods-producing and service-based industries (see Tables 7 and 9). The weak goods-producing industries were largely the result of the shrinking unincorporated sector in the Agriculture Industry. The service-based industries showed substantial growth throughout the period but the corporate sector still outpaced the unincorporated sector in most industries (in particular finance, health and professional services). For instance, the Offices of Physicians and the Offices of Dentists grew an average of about 11% between 1997 and 2002, while the unincorporated sector averaged only 4%. This arose from the increased economic activity of corporate physicians and dentists predominately in Alberta and British Columbia.[27] Also, the average growth of the retail industry for the corporate sector almost doubled that of the unincorporated sector. In retail, new formats such as the expansion of big box stores, have led to the growth in chain stores, which are part of the incorporated sector. Since the mid-nineties chain-store sales have grown faster than independent stores in general.[28]

There are several other possible reasons why the unincorporated sector shrank between 1997 and 2002. It may very well be that more unincorporated businesses, farms or professionals have incorporated relatively to previous years. Second, it may be the case that self-employed individuals have begun to work in corporations. Between 1997 and 2002, employment in corporations went up by close to 1.4 million workers while employment in unincorporated enterprises fell marginally (Table 3). The strong economic conditions in the last half of the 1990s may have favoured the incorporated sector.

27. Similarly, increased economic activity was observed for corporate lawyers in the Professional Services Industry in Alberta and British Columbia.

28. See Statistics Canada (1998). This analysis was based on Statistic Canada United Enterprise Survey for the Retail Industry for the period 1999 to 2002.

6 Conclusion

This study quantifies the unincorporated business sector in terms of its contribution to the Canadian economy (gross domestic product [GDP]). The unincorporated sector contributed $82.2 billion overall in 2002, representing 10.1% of total business sector GDP. However, the share of the sector is much more important for some industries than others. Over 75% of the total was service-based industries where landlords in the Finance Industry and the many professionals made up a large part of the sector. Moreover, the balance between the unincorporated and incorporated sectors in the economy is evolving. For instance, more professionals are now permitted to incorporate [29]

The unincorporated sector grew between 1997 and 2002, averaging about 3.1% growth per year. However, its share of total (business) GDP declined as the incorporated sector outpaced the unincorporated sector in most industries. The incorporated sector almost doubled its average growth over the unincorporated sector in Finance, Health, Professional Services and Transportation. It also grew substantially more in the Construction, Administrative and Other Services, and Retail industries. A noticeable decline in the unincorporated sector occurred in the Agriculture Industry while this industry in the incorporated sector increased substantially.

29. Since January 2006, professionals including doctors, dentist and lawyers have been permitted to incorporate in Ontario.

Appendix A Methodology

A.1 Variables

The estimates of aggregates for the gross domestic product of incorporated and unincorporated sectors were prepared as follows.

Gross domestic product of the incorporated sector

Labour income + Operating surplus (for example, capital consumption) + Other taxes on production − Other subsidies in production

Gross domestic product of the unincorporated sector

Labour income + Mixed income + Other operating surplus (for example, capital consumption) + Other taxes on production − Other subsidies in production

In the Canadian Input-Output Accounts, the main gross domestic product (GDP) aggregates (i.e. labour income and other operating surplus) have been reconciled with the Income and Expenditure Accounts (IEA). In this paper, the components of other operating surplus have not been reconciled with IEA and are based on the authors own calculations. All of the calculations are outlined below. Estimates were obtained from the Input-Output accounts for the years 1997 (final), 1998 (final), 1999 (final), 2000 (final), 2001 (final) and 2002 (preliminary).

A.2 Industries

Estimates were prepared at the S-level aggregation (25 industry groupings), but for the more important unincorporated industries estimates were prepared at the W-level (300 industries) and then aggregated to the S-level. The Owner Occupied Dwellings are not included as part of the study in the estimates of the unincorporated sector. Concerning the treatment of owner-occupied dwellings, the 1993 System of National Accounts (SNA) states "the ratio of owner-occupied to rented dwellings can vary significantly between countries and even short periods of time within a country, so that both international and intertemporal comparisons of production and consumption of housing services could be distorted if no imputation were made for the value of own-account housing services" (1993 SNA, paragraph 6.29).

The S-level industry Health Care and Social Assistance was disaggregated into five W-level industries including Offices of Physicians and Offices of Dentist; the Finance Industries (S level) into the thirteen W-level industries including Lessors of Real Estate and Office of Real Estate Agents and Brokers; Transportation and warehousing (S level) into four W-level industries including Truck Transportation and Taxis and Limousine Services; and Accommodation and Food Service (S level) into three W-level industries including Food Service and Drinking Place.

A.3 Data sources

Data are drawn from a variety of sources. The analysis examines growth rates, the ratio of GDP (and its components) to gross output and the share of GDP to the total industry. Some data on gross output and GDP were provided by SNA analysts' worksheets. These included industries for offices of physicians, offices of dentists, lessors of real estate, agriculture, mining and oil and gas extractions and utilities. For the other industries, estimates were developed by employing the same data sources used in the production of the Canadian Input-Output Accounts.

For the unincorporated sector, data were drawn from Canada Revenue Agency's T1 Universe File, Statistics Canada T1 (Tax Estimate Program [TEP]),[30] SNA analysts' worksheets, and the T1 portion of various Statistics Canada surveys. These surveys are listed below:

- Census of Agriculture;
- Unified Enterprise Surveys (UES) including retail, wholesale, manufacturing, forestry, accountants and food service industry;
- Transportation surveys including motor carriers of freight, couriers and local messenger industry, and taxi and limousine service;
- Various service surveys including automotive repairs, beauty salons, unisex hair salons, and barbershops.

For gross output, data were drawn from the T1 Universe file, gross revenues from TEP, operating revenues from the T1 portion of Statistics Canada surveys and worksheets provided by SNA analysts. Various trends of self-employed owners of unincorporated enterprises from the Labour Force Survey (LFS) were employed to arrive at estimates of gross output. Similarly, the employment and hours worked data for self-employed and paid employees produced by Micro-economic Analysis Division (MEAD) were used.

As for GDP, data were drawn from the GDP components from TEP, the GDP components from T1 portion of Statistics Canada Surveys and from worksheets provided by SNA analysts. Mixed income was used 'as is' from the published Input-Output Accounts. The estimates for other taxes on production, other subsidies on production, claims, financial surplus adjustment and software adjustments and 'resource rents and royalties' were based on their respective shares of gross output.

The corporate estimates were drawn from the T2 portion of the Statistics Canada surveys listed above. Some establishment data on the sales of goods and services from Generalized Index of Financial Information (GIFI) were analyzed to determine the trend in gross output for industries in the incorporated sector. This was the basis for estimating gross output for the incorporated sectors while the portion for the unincorporated sector was derived residually. This was done for physicians and dentists, various construction industries, accountants and lawyers.

The interest and depreciation components of operating surplus for the incorporated sector were derived from the T2 portion of Statistics Canada surveys, from GIFI, from the Annual Financial and Taxation Statistics from the Industrial Organization and Finance Division (IOFD), and from

30. The Tax Estimate Program estimates by Methodology Division are based on a sample of the T1 data from the Canada Revenue Agency.

analysts' worksheets. The combined estimates of depreciation for both sectors were further compared with the geometric depreciation by industry from Investment and Capital Stock to determine the appropriate level and growth.

A.4 Data limitations

Data sources for which data are missing for some years

- Data are not available for GIFI prior to 1999;
- Data are not available for various UES surveys prior to 1999;
- Data are not available in T1 TEP for 1997, and interest payment is missing for 1998; and
- Data are not available for Claims, Financial Surplus and Software adjustments for 1997 and 1998.

Data quality

- There is a break in the IOFD data between 1998, the last year using Standard Industrial Codes, and 1999, the first year using North American Industrial Codes;
- T1 Universe data over-estimated gross revenue for lawyers and accountants because of double counting the revenues of partnerships.

Both the missing data and other data quality issues were addressed through careful scrutiny and analysis. This included using the ratio of GDP (including the various components) to gross output of previous years to move current period GDP values, or by trending gross output of various industries in the unincorporated sector with employment and hours worked data from the LFS or MEAD.

Appendix B Corporations' Output

The unincorporated sector generated $158 billion of gross output in 2002. This represented 9.2% of the total produced in the business sector down from 10.6% in 1997. The sector grew an average 2.9% per year between 1997 and 2002, well below the average growth of 6.2% for corporations (Tables 10 and 11).

For the unincorporated sector, some of the goods-producing industries have moved up in the ranking of industry production (see Table 10). For instance, the Construction Industry is ranked second in Table 10 (Gross Output) compared to fifth in the Table 7 (gross domestic product). This industry is more integrated into the economy, purchasing more inputs to generate a dollar of output compared to the Health Industry (ranked second in Table 7) which is less integrated as doctors and dentists primarily provide their services in generating a dollar of output.

Table 10
Gross output of unincorporated enterprises, ranked by importance

	Level						Growth rates					Average growth rates
	1997	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	2002/1997
	millions of dollars						percent					
All industries	134,443	138,290	144,953	151,401	154,959	157,598	2.9	4.8	4.4	2.4	1.7	2.9
Goods producing	50,596	50,611	51,419	52,532	54,299	53,402	0.0	1.6	2.2	3.4	-1.7	0.9
Services	83,848	87,679	93,532	98,871	100,660	104,194	4.6	6.7	5.7	1.8	3.5	4.0
Industry group												
Finance	24,675	26,082	27,206	28,378	29,076	30,661	5.7	4.3	4.3	2.5	5.5	4.0
Lessors of real estate	20,223	21,437	22,176	22,856	23,554	24,462	6.0	3.4	3.1	3.1	3.9	3.5
Agencies, brokerage and other insurance	1,860	1,907	2,017	2,359	1,929	1,674	2.5	5.8	17.0	-18.2	-13.2	-1.7
Office of real estate agents/brokers	2,065	2,194	2,343	2,401	2,942	3,245	6.2	6.8	2.5	22.5	10.3	9.5
Construction	23,000	24,263	24,926	26,167	27,498	28,367	5.5	2.7	5.0	5.1	3.2	3.9
Health	16,370	16,953	17,806	18,492	19,440	20,111	3.6	5.0	3.9	5.1	3.5	3.8
Offices of physicians	8,050	8,438	8,812	9,025	9,257	9,574	4.8	4.4	2.4	2.6	3.4	3.2
Office of dentists	4,340	4,598	4,962	5,278	5,583	5,825	5.9	7.9	6.4	5.8	4.3	5.7
Agriculture	21,140	20,238	19,520	19,022	19,755	18,300	-4.3	-3.5	-2.6	3.9	-7.4	-2.2
Professional services	12,156	13,234	15,372	16,658	16,411	16,397	8.9	16.2	8.4	-1.5	-0.1	5.8
Retail	7,604	7,693	8,521	9,060	9,089	9,162	1.2	10.8	6.3	0.3	0.8	3.4
Transportation	6,765	7,120	7,096	7,364	7,381	7,654	5.2	-0.3	3.8	0.2	3.7	2.2
Truck transportation	5,174	5,350	5,273	5,575	5,684	5,852	3.4	-1.4	5.7	2.0	3.0	2.2
Accommodation and food service	4,151	3,771	3,455	3,759	3,799	4,067	-9.2	-8.4	8.8	1.1	7.1	-0.3
Food service and drinking places	3,442	3,116	2,756	3,041	3,118	3,228	-9.5	-11.6	10.3	2.5	3.5	-1.0
Administrative services	3,599	3,802	4,357	4,862	4,944	5,265	5.6	14.6	11.6	1.7	6.5	7.7
Other services	3,277	3,397	3,683	3,868	4,020	4,091	3.7	8.4	5.0	3.9	1.8	4.1
Manufacturing	2,725	2,538	2,871	3,336	3,177	2,867	-6.9	13.1	16.2	-4.8	-9.8	0.9
Wholesale	2,354	2,559	2,780	2,900	2,744	2,883	8.7	8.6	4.3	-5.4	5.1	3.7
Forestry	1,927	1,807	2,041	1,990	1,800	1,793	-6.2	12.9	-2.5	-9.5	-0.4	-1.2
Education	1,304	1,440	1,585	1,671	1,752	1,863	10.4	10.1	5.4	4.8	6.3	7.1
Arts and entertainment	1,266	1,167	1,190	1,350	1,487	1,553	-7.8	2.0	13.4	10.1	4.4	3.8
Fishing	928	865	1,108	1,106	1,034	1,086	-6.8	28.1	-0.2	-6.5	5.0	2.8
Mining and oil and gas extractions	597	634	608	528	583	535	6.2	-4.1	-13.2	10.4	-8.2	-1.7
Information services	327	461	481	509	517	487	41	4.3	5.8	1.6	-5.8	8.2
Support activities for agriculture	270	261	321	354	416	412	-3.3	23	10.3	17.5	-1.0	8.8
Utilities	9	5	24	29	36	42	-44.4	380	20.8	24.1	16.7	61.1

Source: Taken from author's calculations.

Table 11
Gross output of corporations, ranked by importance

	Level						Growth rates					Average growth rates
	1997	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	2002/1997
	millions of dollars						percent					
All industries	1,131,926	1,178,091	1,295,523	1,481,651	1,511,698	1,553,272	4.1	10.0	14.4	2.0	2.8	6.2
Goods producing	642,190	650,357	720,886	848,844	842,351	853,433	1.3	10.8	17.8	-0.8	1.3	5.5
Services	489,737	527,732	574,633	632,806	669,347	699,835	7.8	8.9	10.1	5.8	4.6	7.2
Industry group												
Manufacturing	446,671	460,428	512,824	596,377	581,769	587,220	3.1	11.4	16.3	-2.4	0.9	5.2
Finance	129,579	138,109	149,636	161,792	169,670	177,566	6.6	8.3	8.1	4.9	4.7	6.2
Lessors of real estate	23,656	25,142	26,818	26,577	27,846	29,476	6.3	6.7	-0.9	4.8	5.9	4.1
Agencies, brokerage and other insurance	5,268	5,411	5,612	5,803	4,610	5,451	2.7	3.7	3.4	-20.6	18.2	0.6
Office of real estate agents and brokers	4,802	5,200	5,940	6,058	7,842	9,019	8.3	14.2	2.0	29.4	15.0	14.6
Construction	82,852	83,263	88,454	94,599	105,364	113,632	0.5	6.2	6.9	11.4	7.8	6.2
Wholesale	67,578	71,289	75,422	83,613	88,995	91,799	5.5	5.8	10.9	6.4	3.2	6.0
Retail	59,359	63,652	67,774	74,474	80,317	86,212	7.2	6.5	9.9	7.8	7.3	7.5
Mining and oil and gas extractions	54,314	48,264	56,793	89,868	89,360	83,104	-11.1	17.7	58.2	-0.6	-7.0	8.8
Transportation	62,603	65,171	70,206	76,512	79,793	81,075	4.1	7.7	9.0	4.3	1.6	4.9
Truck transportation	16,800	17,021	18,507	21,050	22,886	22,221	1.3	8.7	13.7	8.7	-2.9	5.4
Professional services	36,150	42,234	49,524	58,713	61,579	63,524	16.8	17.3	18.6	4.9	3.2	12.6
Information services	42,904	48,095	51,750	56,249	59,978	62,471	12.1	7.6	8.7	6.6	4.2	7.6
Accommodation and food service	35,334	37,935	40,753	43,868	45,805	47,489	7.4	7.4	7.6	4.4	3.7	5.7
Food service and drinking places	24,601	26,883	29,298	31,953	33,320	34,439	9.3	9.0	9.1	4.3	3.4	6.7
Utilities	31,315	31,275	32,878	36,191	34,967	36,944	-0.1	5.1	10.1	-3.4	5.7	3.0
Administrative services	19,575	21,675	25,386	28,390	31,079	33,869	10.7	17.1	11.8	9.5	9.0	12.2
Other services	16,163	17,252	19,917	22,604	23,838	24,922	6.7	15.4	13.5	5.5	4.5	9.0
Agriculture	14,066	14,603	15,798	18,031	18,747	19,317	3.8	8.2	14.1	4.0	3.0	6.2
Arts and entertainment	9,258	10,495	11,508	12,819	13,556	14,863	13.4	9.7	11.4	5.7	9.6	10.1
Health	10,304	10,818	11,656	12,598	13,509	14,735	5.0	7.7	8.1	7.2	9.1	7.2
Offices of physicians	2,313	2,425	2,532	2,821	3,262	3,674	4.8	4.4	11.4	15.6	12.6	9.8
Office of dentists	1,591	1,686	1,819	1,935	2,221	2,456	6	7.9	6.4	14.8	10.6	9.1
Forestry	11,095	10,699	11,797	10,982	9,397	10,360	-3.6	10.3	-6.9	-14.4	10.2	-1.1
Support activities for agriculture	1,092	999	1,419	1,657	1,579	1,685	-8.5	42	16.8	-4.7	6.7	9.1
Education	930	1,007	1,101	1,174	1,228	1,310	8.3	9.3	6.6	4.6	6.7	6.8
Fishing	785	826	923	1,139	1,168	1,171	5.2	11.7	23.4	2.5	0.3	8.2

Source: Taken from author's calculations.

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